LIVERPOOL AND DISTRICT REGIONAL SURVEY ASSOCIATION.

Workplaces and Movement of Workers in the Merseyside Area

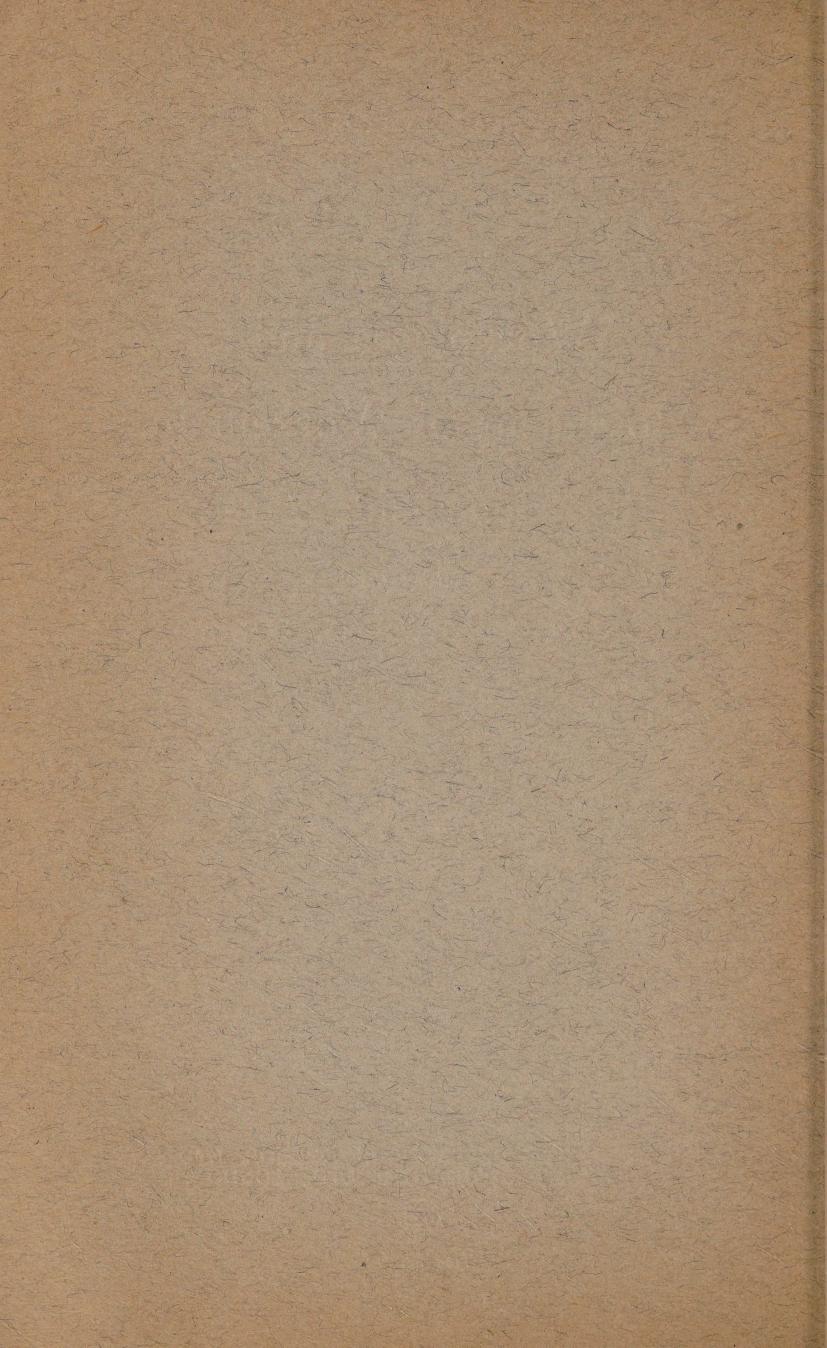
based on the CENSUS RETURNS, 1921.

W. HEWITT, B.Sc.

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Workplaces and Movements of Workers in the Merseyside Area, based on the Census Reports, 1921.

THE Census of Great Britain, taken on the night of June 19th, 1921 (after being postponed, from April 24th as originally arranged on account of a disturbed industrial situation) was in some respects organised on different lines from those which had been followed on previous occasions. Amongst other differences it was sought to obtain statistical information as to the exact locality in which the occupied members of the population carried on their work, as well as the localities in which they resided—or more accurately, the places in which they were found on the night when the census was taken. In the Introduction to the special volume of the Census Reports devoted to "Workplaces," it is stated that, "So far as the Department is at present aware, this is the first occasion upon which statistics of workplaces have been obtained and presented by any country in the world."

There are many considerations arising out of a discussion of such statistics, which are of interest and importance in connection with questions of local government, of transport, of town and regional planning, and of economics. The Registrar-General points out, in the preface to this special volume, that the "tides of daily ebb and flow" of large masses of the population, in many parts of the country, constitute a feature of comparatively recent times, being due to the creation of large manufacturing, distributing, and commercial centres. This development "has not only given rise to concentration of

workers beyond the residential capacity of their immediate neighbourhoods, but has exaggerated that deficiency by substituting factories, warehouses and offices for dwellings in the centres themselves; whilst the very development of transport which has made it necessary for the worker to live at a distance from his work has also made it possible for him to do so." Hence large numbers of workpeople are led to spread themselves over considerable areas of the country surrounding the urban centres, in order to find dwelling places and homes for themselves and their families.

Problems connected with the movement of such workers to and from their place of occupation with the least possible loss of time, at the lowest expense, and with the greatest comfort and convenience, at once arise. And since the movement is comprised, for the most part, within comparatively short periods of time at the beginning and the end of the working day, the problems of transport are intensified and complicated. Besides the questions connected with the actual transport of the workers various other social problems are involved, arising, for example, from the resulting division of personal interest, on the part of this tidal population, between the working place on the one hand, and the place of residence on the other—neither locality evoking the whole hearted interest of the man or woman in its good government, its amenities, and its general progress. This loosening of the bonds of association with one settled locality, which has become so marked a feature in connection with the great changes in the organisation and development of trade and industry in recent years,—changes largely stimulated and aided by the development of more and more rapid and convenient modes of transport—has been accompanied by changes in social organisation and interests which claim the close attention of all serious students of public life and affairs.

The following pages contain a brief discussion of some facts connected with this distribution and movement of the working population, as it concerns the Merseyside area and the surrounding contributory regions of Southwest Lancashire, West Cheshire, and that portion of North Wales bordering the estuary of the Dee.

THE MERSEYSIDE BOROUGHS.

The four county-boroughs of Liverpool, Bootle, Birkenhead and Wallasey, grouped in pairs on the east and west banks of the Mersey estuary near the mouth, may for many purposes be regarded as forming one vast community of well over one million people, linked together by a number of common interests and by a nexus of intercommunication. The enumeration of the population found in those boroughs on the night of the census, June 19th, 1921, showed:

		Males.	Females.	Total.
Liverpool		 383,394	419,546	802,940
Bootle		 37,405	39,082	76,487
Birkenhead		 70,602	74,975	145,577
Wallasey	= 4	 41,101	49,708	90,809
		532,502	583,311	1,115,813

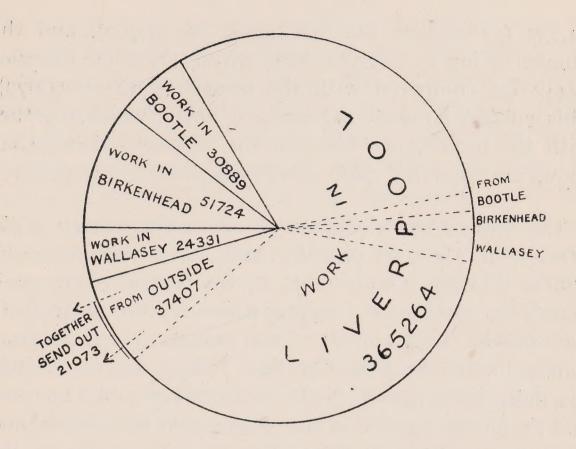
But the detailed census returns show that during the day time a total of 21,073 workers go out from these boroughs to employment in other areas. At the same time, a still larger number, viz.: 37,407 persons, come from outside areas to work in one or other of the four boroughs. The gross day time population shows, therefore, a net excess over the night population amounting to 16,334 persons. And the aggregate (daily) movement of workers out of and into these boroughs amounts to 58,480 persons.

Added to this, there was an interchange of workers among the four boroughs amounting to a total of 48,554, made up as follows:—

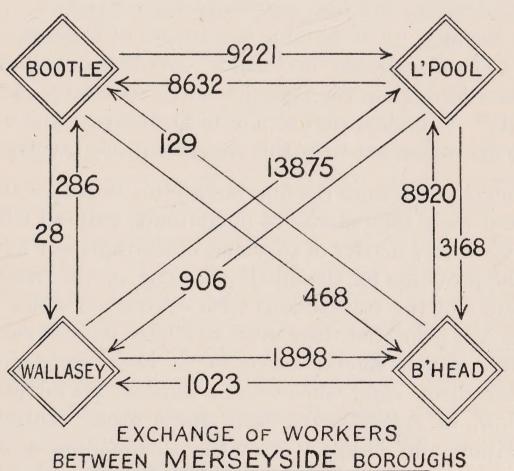
	Liver		Boo		Birke	enhead	Walla	asey
	sends	receives	sends	receives	sends	receives	sends	receives
	to	from	to	from	to	from	to	from
Liverpool			9221		8920		13875	
Liverpoor				8632		3168		906
Bootle {	8632		-		468		286	
Doorie		9221		-		129		28
Birkenhead {	3168		129		-		1898	
Dukemead		8920		468				1023
Wallasey {	906		28		1023			
Wallascy	•	13875	•	286		1898		-
	12706		9378		10411		16059	
		32016		9386	•	5195		1957

There is thus involved a total movement of persons (workers) amounting to 107,034; made up of 48,554 changing places within the area of the four boroughs, and 58,480 coming into or going out from that area to their respective workplaces elsewhere.

These figures, however, require some qualification, if we wish to have regard to the regular daily movement of the working population. The census figures, as they stand, include a considerable number of persons whose workplaces or places of enumeration respectively, as given in the returns, are at very considerable distances from Merseyside, e.g. London, South Wales, or even outside England and Wales. This precludes the idea of their being regular workers, travelling daily to and fro over those great distances. Most of these cases, no doubt, refer to visitors temporarily present on the occasion of the census, or else to seamen or other travellers whose occupation involves periodical movement over considerable distances. In order to get an approximate idea of the regular daily movement let us revise the figures so as to include only those persons scheduled as working or residing within a radius of about fifteen miles from Merseyside. We then find that the number coming from outside within that distance to work within the four boroughs is



WORKERS IN MERSEYSIDE BOROUGHS



BETWEEN MERSEYSIDE BOROUGHS

24,257 (as against the first figure of 37,407), and the number going to work outside, within the same distance 12442 (as compared with the former figure of 21,073). This will give a revised aggregate of 36,699, which, together with the interchange between the boroughs themselves, shows an estimated *daily* movement of 85,253 workers.

The importance of the traffic across the estuary of the Mersey, on the part of daily workers, is seen from the figures showing a movement in this region of approximately 29,500 persons coming from Cheshire to work in Lancashire, with about 5,800 others crossing from Lancashire to work in Cheshire. These figures include the daily exchange of 27,780 workers between Liverpool and Bootle on one side of the estuary and Birkenhead and Wallasey on the other side. This extensive traffic, by the ferries and the Mersey Railway, is mainly concentrated into a period of from one to two hours in the morning, and repeated again, within a somewhat similar period, in the early evening. A very large proportion of these persons have to be distributed, by tramcar, omnibus or rail, from the river termini on the Cheshire side, over a large area of country. It is clear that serious local transport and other problems connected with this movement are involved.

Even if we consider the four Merseyside boroughs alone, the vast daily interchange of inhabitants, with all that it involves in the matter of easy and quick transport to and fro, the provision for the midday feeding of the travelled workers and the transactions with centralised shops and stores, it is plain that there must be a large body of related interests which should make for a close co-operation between them. But when we also consider the increasing overflow, in recent years, from these urban centres of population and industry into the surrounding areas—areas which not very long ago were almost purely rural and agricultural, with only small village communities,

but which have been so completely changed in character by the invasion—it is obvious that a need exists for a wider and regional outlook on the facts and problems. The rhythmical movement of armies of workers, as well as of other persons from the developing areas drawn to the larger centres for shopping and other purposes, the distribution of food supplies and other goods, questions of sanitation and health (e.g. water supply, drainage, the spread of infection), the provision of facilities for health and recreation in the form of parks, open spaces and playing fields, of schools, libraries, etc., these and other considerations suggest the existence of problems which cannot be fully dealt with by single municipal administrative units, but demand a much wider outlook and scope, and more unified consideration and treatment.

Coming now to discuss the statistics relating to certain individual localities in the area we shall find some interesting and suggestive facts presenting themselves for consideration.

LIVERPOOL.

This city and county borough is credited with a population of 802,940 on the *night* of the census, but according to the further statistics dealing with "workplaces," the *day-time* population amounted to 840,947, a difference of 38,007 in excess, or 4.7 per cent. The difference is accounted for by first deducting those workers who, after being enumerated in Liverpool during the night, went out during the day to work elsewhere; and then adding a much larger number of persons who, after being enumerated elsewhere during the night, came to work in the city during the day. The following are the summarised census statistics:

	Males.	Females.	Total.
Enumerated night			
population	383,394	419,546	802,940
including Occupied per-			
sons over 12 years of			
age*	247,249	108,080	355,329
	=64.5%	=25.8%	=44.2%
Workers outside city	18,608	4,172	22,780
City workers from out-			
side	46,182	14,605	60,787
Net daytime increase	27,574	10,433	38,007

^{*} These figures from Table XVI of the Special Volume on workplaces differ slightly from those given in the General Census return previously published.

Thus we see that, to the 332,549 persons over 12 years of age who both reside and work in Liverpool (including here, for our purpose, as the Registrar-General does, those enumerated as having "no fixed workplace," or with "workplace not stated"), there are added, as day workers in the city, another 60,787 persons. These incomers therefore form 15.4 per cent. of the total city workers, a not inconsiderable proportion, who are interested in Liverpool as a workplace, but whose interest is divided and shared with various scattered places associated with their homes and family concerns and with their evening and week end activities.

From the special census volume on "Workplaces" we can obtain some particulars as to where these 60,787 persons, who travel backwards and forwards to their work in the city, reside either from choice or necessity. We must not, of course, lose sight of the fact that the record in the census returns merely shows the particular locality in which the persons were found on the night of June 19th, 1921, but this may reasonably be taken, in all but a very small minority of cases, as the place of residence of the individual.

- (a) Some 17,175 persons who give Liverpool as their workplace were enumerated in places on the Lancashire coast, viz. Bootle (9,221), Waterloo and Seaforth (3,818) Great Crosby and Little Crosby (1,784), Formby (630) and Southport (1,722), with a further 583 from still more distant places on the coast—(Preston (100), Lytham (26), St. Anne's (70) and Blackpool (387). In certain cases it is possible that some of the persons so enumerated may have been holiday visitors, and not permanent residents.
- (b) Litherland (1,539), and the various townships (Aintree, Sefton, Kirkby, etc.) in the area of the Sefton Rural District Council together furnish a total of 2,169.
- (c) A further contingent of 1,187 is made up of 715 from the townships (Maghull, Melling, Aughton, etc.) comprised in the area of the W. Lancashire Rural District Council, and from Ormskirk (332), Skelmersdale and Lathom and Burscough.

Thus from the above districts lying to the north of Liverpool, served by railway lines running mostly into the Exchange station, and by the old main highway from Liverpool to Preston with its tributary branches, comes an aggregate body of 21,114 persons.

- (d) From districts to the north-east—Prescot (138), Huyton and Roby (462), and St. Helens (343), making a total of 943, with a further aggregate of 548 from more distant localities, Wigan, Abram, Ashton-in-Makerfield, Newton-in-Makerfield, Chorley, Bolton and Blackburn—largely along the line of the Lancashire and Yorkshire Railway, or the main highway out of Liverpool through Prescot and St. Helens.
- (e) From the east comes a body of 790 persons, collected from Widnes (330), Warrington (119) and the townships comprised in the area of the Whiston Rural District Council (341), e.g. Hale, Rainhill, Ditton, etc.; together with a further 1,592 from more distant places around Manchester and including 1024 from Manchester itself.

(We may note here that no less than 1449 persons enumerated in Liverpool were recorded as having their workplaces in Manchester, these figures testifying to a considerable interchange between the two cities, facilitated by the frequency and regularity of the railway services.)

This brings the total accounted for above to 24,987, out of the full total of 25,892 coming from Lancashire into Liverpool, the balance being made up of persons from more distant places (Morecambe, Barrow, etc.) and of small numbers from a large number of places not separately specified in the printed return.

Cheshire supplies Liverpool with a larger contingent (28,242) of workers than Lancashire (25,892). When we consider the workers supplied from the Cheshire side of the Mersey we find them for the most part travelling in two main streams:—

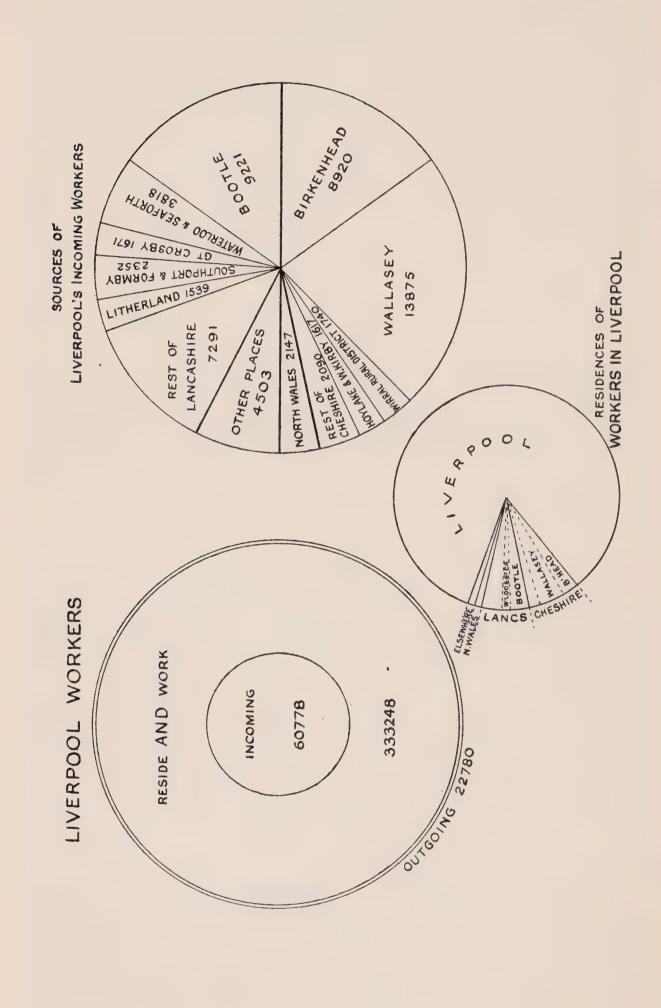
- (f) From Wallasey (13,875), along with which will be a considerable proportion of those from Hoylake and West Kirkby (1,617), making a combined total of 15492.
- (g) From Birkenhead (8,920), from the districts along the shore of the estuary: Higher Bebington (107), Lower Bebington (605), Bromborough (67), and Ellesmere Port (35); joined by a considerable proportion of the 158 from Neston and of the 1,740 from the various townships (Moreton, Bidston, Upton, Heswall, Prenton, etc.) under the Wirral Rural District Council, making an aggregate of 11,632, passing for the most part through Birkenhead as the gateway to Liverpool.
- (h) Chester sends 207, and through Chester on to Birkenhead will pass the contingent from North Wales, namely 691 from Flintshire (including Hawarden 85, Holywell 223, Prestatyn 133, and Rhyl 73), 639 from Denbighshire (including Colwyn Bay 173, Llangollen District, 154, Wrexham 90), while from Carnarvonshire come 817

(including 317 from Llandudno, and 76 from Conway). In several of these last mentioned cases we must again make due allowance for the possible temporary presence on the census night of holiday visitors from Liverpool. The Registrar General, in his introduction to the special Report, gives this warning, and estimated that the enumerated census population of Llandudno was 33 per cent. in excess of the normal residential population, of Colwyn Bay 15.7 per cent., Prestatyn 27.9 per cent., Rhyl 22.7 per cent., and Llangollen 9.7 per cent.

The aggregate total of the various figures grouped above is 54,465, out of the census total of 60,787 persons returned as "working in the county borough [Liverpool] but enumerated elsewhere." The balance is accounted for by small numbers from many localities in Lancashire and Cheshire not detailed and from 32 other counties of England and Wales.

OCCUPATIONS.

There is no direct information to be obtained from the census returns as to the occupations followed by the persons coming from outside to their workplaces in Liverpool. The return gives only an analysis of the occupations of persons enumerated in a particular area, without reference to their actual place of work. classification of occupations adopted for the census return is an elaborately detailed list, classified in 31 Sections with numerous sub-divisions. For our present purpose, however, it will be sufficient to summarise the information still further under six groups as follows:— I. Public Services and Administration (comprising Sections XXI, XXIV and XXVI); 2. Professional (Section XXV); 3. Commercial (Sections XXIII, XXVIII); 4. Personal Service (Section XXVII); 5. Transport and Storage (Sections XXII, XXIX), and 6.



Industrial (comprising all the other sections). It may be well to note in passing that under the "Commercial" group are included proprietors and managers of businesses, salesmen and shop assistants, agents, travellers, hawkers, etc.; as well as workers in offices and banks, etc.; that "Professional" includes nurses, teachers, librarians, artists, architects, etc., as well as clergy, lawyers and doctors; and that under "Personal Service," in addition to the large class of domestic servants, come innkepers and lodging house keepers, waiters, laundry workers, charwomen, etc.

The occupational statistics for the persons enumerated in Liverpool, in accordance with the grouping indicated above are:

		Males.	Females.	Total
Public Services and	Adminis-			
tration	• • • • •	8311 or 3.3%	1655 or 1.5%	996 6
Professional		4893 ,, 2.0	7470 ,, 7.0	12363
Commercial		37740 ,, 15.3	26841 ,, 24.8	64581
Personal Service		7634 ,, 3.1	31202 ,, 29.0	38836
Transport and Storage		81007 ,, 32.7	9716,, 9.0	90723
Industrial		107664 ,, 43.6	31196 ,, 28.7	138860
Total occupied p	persons	247249	108080	355329

These figures show the occupied population of Liverpool as being very largely (64.6 per cent.) engaged in various forms of industry and transportation, with a considerable body of persons (18.2 per cent.) engaged in commercial and financial work. It is probably right to assume that a very large proportion of the workers engaged in industry, transport and storage (docks, warehouses, etc.) will seek to live as much as possible in the near neighbourhood of their workplaces, and therefore within the city area. The same is true of those coming under the grouping Personal Service, largely made up of domestic servants—of whom 16,191 are recorded in Liverpool, being equal to 15 per cent. of the total number of employed females. But the clerks, typists, bookkeepers and others engaged in office work (18.2 per cent.), most of the shop assistants and of the

professional class, are more free, and perhaps often more disposed, to live in the suburban areas, at a greater distance from their city workplaces. The great stream of workers coming from across the Mersey, or by railway from places along or near the Lancashire coast, is very largely made up of members of these last mentioned classes, as is suggested by an examination and analysis of the census figures showing the recorded occupations of residents in those areas. Thus we find that, of the total workers enumerated on the night of the census in Wallasey 32.3 per cent. belong to the "Commercial" group, 25.6 in Hoylake and West Kirby, 25.2 in Waterloo and Seaforth, 27.1 in Great Crosby, as compared with 18.2 resident in Liverpool itself.

It is unfortunate that we cannot make a direct and detailed comparison with the statistics of workers given in the report of the previous census (1911), since—in addition to the fact before mentioned that workplaces were not then ascertained and recorded—the classification of occupations adopted for the census of 1921 is not on the same basis as on the former occasion. We can, however, make one comparison which is significant, namely a comparison of the proportion between the numbers of male and female workers at the two dates. We find that while the ratio of occupied males to occupied females as a whole has remained much the same, in the case of clerical workers (classed as "Commercial and Business Clerks" in 1911, and "Clerks, Typists and Draughtsmen" in 1921), the ratio of males to females which was about 4 to I in 1911 in the four Merseyside boroughs had fallen in 1921 to figures varying between 2 to I and 3 to 2. This shows the great incursion of women into offices, banks and commercial life generally, which was due in the main to the absence of men in the war years, but which has been since maintained to a large extent.

OUTWARD MOVEMENT OF WORKERS.

While Liverpool receives a total of 60,787 workers from outside, it sends out, in return, from its resident population a considerable number to the neighbouring Merseyside boroughs and to other adjacent districts. A total of 22780 persons (being 18,608 males, and 4,172 females) enumerated in Liverpool gave their workplaces as being in other areas.

More than half of these external workers (12,706) go to the other three boroughs, viz. to Bootle 8,632, to Birkenhead 3,168, and to Wallasey 906. Bootle, being geographically only a northern extension of Liverpool, naturally takes by far the larger number, and probably most of these are workers in the docks and various industries. Industrial workers also, no doubt, make up the greater part of those going to the adjacent urban districts of Litherland (451), Prescot (530), and to the townships in the Sefton Rural District (840), which include Aintree where considerable industrial development took place during and after the war.

Other workers pass out to Waterloo and Seaforth (297), and Great Crosby (175), while others again go farther afield to St. Helens (283), Widnes (237), and Warrington (103). Manchester and Salford are given as the workplaces of 1,623.

An important contingent consisting of 650 workers goes from Liverpool to the comparatively small district of Lower Bebington on the Cheshire side, which will no doubt be largely made up of females proceeding to the extensive soap works of Messrs. Lever Bros., at Port Sunlight.

No less than 1,465 persons enumerated in Liverpool gave their workplaces as being outside England and Wales. These would include many foreign seamen, with a considerable number of persons temporarily present for business and other purposes in the city, or passing through it on their journeys.

BOOTLE.

Although regarded as a separate area for purposes of local government, Bootle is essentially with Liverpool a part of one community; the docks, houses and workshops of Liverpool having gradually extended northwards, until for all practical purposes—apart from the accident of history and local government organisation—it forms one continuous interdependent urban area. Under such circumstances and the stress of modern economic conditions, the precise locality in which persons, and especially those in the lower grades of industry, find their workplaces and their dwelling places is very much a matter of accident and opportunity rather than of deliberate choice.

The census returns for the county borough of Bootle show a resident population of 76,487, but with a considerable movement of workers both out from and into the borough.

	Males.	Females.	Total.
Enumerated night			
population	37,405	39,082	76,487
Including Occupied per-			
sons over 12 years of			
age	24,591	8,700	33,291
	=65.7%	=22.3%	=43.5%
Workers outside borough	7,955	3,867	11,822
Workers coming from			
outside	11,935	2,184	14,119
Net daytime increase	3,980	—1 683	2,297

It will be observed that while the number of males coming from outside to work in the borough is much larger than the number of those going outside to work elsewhere, the reverse is true in the case of the female workers, the number of those going outside approaching double the number of those coming in to work in the borough. This is probably to be accounted for by the fact that, while the large modern docks, engineering and ship repairing works, timber yards, tanneries, etc. situated within the area provide occupation for a very large body of men, drawn in part from outside, the large shipping and commercial offices which are concentrated in Liverpool, and the large stores and shops in that city, attract a considerable number of female workers. And among the relatively large number (1,216) of workers going to the neighbouring urban district of Litherland will be included a considerable number of women workers in the large match works, and other industries of that district.

The great majority of the *immigrant* or incoming workers come from the immediately adjacent districts of Liverpool (8,632), Litherland (1,531), Waterloo and Seaforth (1,291), which together account for about five-sixths of the total number. Others come from residential seaside districts further north—Great Crosby (314), Formby (51) and Southport (161); while from across the Mersey come 468 from Birkenhead, 286 from Wallasey with 219 from other parts of Cheshire. Manchester district, including Salford and Stretford, had a total of 454 persons enumerated with workplaces in Bootle.

As regards what we may term the *emigrant* or outgoing workers (11,822) we may note the approximately equal exchange of persons with Liverpool (8,632 into Bootle and 9,221 out), and also with Litherland (1,531 into Bootle and 1,216 out). These supplies to Liverpool and Litherland, together with 642 others going to the adjoining areas of Seaforth, Waterloo and Great Crosby, account for nearly nineteen-twentieths of the total exodus. There were 63 persons enumerated in Bootle having workplaces outside England and Wales, including no doubt mainly seafarers.

An analysis and classification of the workers enumerated in Bootle at the census gives the following summarised statistics:—

	Males.	Fem	ales.
Public services and ad-			
ministration	744 or 3%	146	or 1.7%
Professional	355 ,, 1.4	480	,, 5.5
Commercial	2,854 ,, 11.6	2,252	,, 25.9
Personal service	519 ,, 2.1	2,360	,, 27.0
Transport and Storage	9,323 ,, 37.9	605	,, 7.0
Industrial	10,796 ,, 43.9	2,857	,, 32.8
	errore en		
Total occupied persons	24,591	8,700	

The proportion of industrial workers in the case of men is almost exactly the same as in Liverpool, but the percentage engaged in transport and storage (warehousing, etc.) is larger, while the percentage of commercial and financial workers is smaller, than in Liverpool. regards the transport workers we may note that the largest and newest docks, accommodating the largest vessels connected with the transatlantic trade are within the borough of Bootle. A distinctly larger percentage of women workers engaged in industrial occupations was enumerated in Bootle than in any of the other Merseyside boroughs; and we may perhaps relate this fact to the large outflow of Bootle residents to works in Litherland already referred to, as well as to the existence in the borough of important women's industries in the form of dve works, etc.

BIRKENHEAD.

The county borough of Birkenhead is credited in the census return with a population of 145,577, constituting it the second of the four Merseyside boroughs in point of numbers. While it houses a large industrial population for its own works, it also serves as the bedroom and

family centre for a large number of Liverpool workers, especially in the pleasantly situated higher ground near its inland boundary. It sends out from its area more than twice as many workers as it takes in, and consequently its daytime population is less by 8,911 than its enumerated night time residents, a shrinkage of over 6 per cent.

	Males.	Females.	Total.
Enumerated night			
population	70,602	74,975	145,577
Including Occupied per-			
sons over 12 years	46,667	17,036	63,703
	=66.1%	=22.7	=43.8
Working outside bor-			
ough	11,858	5,428	17,286
Workers coming from			
outside	7,142	1,233	8,375
Net daytime decrease	4,716	4,195	8,911

Considering first the details of the outgoing workers, we find that rather more than half of the total, to the number of 8,920, cross the Mersey to work in Liverpool, with 468 more going to Bootle, and 530 to various other parts of Lancashire. The great bulk of the remainder pass out to the immediately adjacent parts of Wirral. Thus 1,023 cross over the intervening Great Float with its docks into the neighbouring borough of Wallasey, in exchange for a somewhat larger number coming from that place. But the most noticeable fact is the very large number (4,123) of workers going to the adjoining district of Lower Bebington, made up in great part of females going to the various departments of the soap works at Port Sunlight; while a further 657 proceed somewhat further out to the candle works and other industries in the adjacent district of Bromborough. The balance (944) of the total number of 6,747 persons going out from Birkenhead to workplaces in Cheshire, is distributed mostly to Ellesmere Port and the townships of Northern Wirral, while a total of 126 workers are enumerated as having workplaces in the nearer parts of North Wales—Flintshire and Denbighshire.

Before discussing details of the workers coming in from outside let us note the summarised classification of workers enumerated in Birkenhead:

	Males.	Females.
Public Services and Ad-		
ministration	1,384 or 3%	287 or 1.7%
Professional	1,043 ,, 2.2	1,329 ,, 7.8
Commercial	6,735 ,, 14.4	4,836 ,, 28.4
Personal Service	946 ,, 2.0	5,873 ,, 34.5
Transport and Storage	11,864 ,, 25.4	1,368 ,, 8.0
Industrial	24,695 ,, 52.9	3,343 ,, 19.6
		t-maratus dalah mana-manarara
Total occupied persons	46,667	17,036

Birkenhead has a notably larger proportion of its male population engaged in industrial occupations (52.9 per cent.) than either Liverpool or Bootle (43.6 and 43.9 per cent.), which is compensated for by a larger proportion of men in the Lancashire boroughs engaged in transport and warehousing services. And in further comparison with those boroughs we may note a somewhat larger proportion of females engaged in commercial occupations; and a much smaller proportion of female workers in the industrial group, notwithstanding that Birkenhead supplies a number of such workers to Port Sunlight as already mentioned. The larger proportion of female commercial workers comprises a great many women clerks, typists and shop assistants, who find employment in the offices and shops in Liverpool, which are so readily accessible from the landing stage where the ferries land their morning passengers.

As regards the dwelling places of the 8,375 workers coming from outside into Birkenhead, Liverpool at once accounts for two-fifths of the total number, viz.: 3,168,

though this is little more than one-third of the number which Birkenhead supplies to Liverpool in return. remaining 524 workers coming from Lancashire include 129 from Bootle, 45 from Waterloo and Seaforth; and 48 from Southport (some possibly merely temporarily resident there), together with 45 enumerated in Manchester. From Cheshire districts outside the borough comes a total of 3,930 persons, of whom a considerable proportion (1,895) come across the docks from Wallasey; while 622 come from Lower Bebington and Bromborough in exchange for the very much larger number sent to those The remainder largely come from the residential districts in the adjoining Wirral townships (Prenton, Noctorum, Bidston, Moreton, etc.) to the number of 734, with 315 from Hoylake and West Kirby. A small number (180) come from the Deeside counties of North Wales.

WALLASEY.

Wallasey and Birkenhead, lying side by side on the Cheshire shore of the Mersey estuary, present a markedly different condition of mutual relationship to that between Bootle and Liverpool which lie opposite to them on the Lancashire side. There is a very distinct physical division between Wallasey and Birkenhead, formed by the old broad inlet from the estuary, formerly known as Wallasey Pool, but now enclosed to form the Great Float with its series of docks and quays. Until quite recently the communication between the two places across the Pool was very restricted, and Wallasey's connection with Liverpool by means of its ferries was much more extensive and important than that with its next door neighbour. This is reflected in the fact that while Wallasey sends no less than 34.7 per cent. of its total enumerated workers to Liverpool, the proportion going to Birkenhead in only 4.7.

Wallasey has had a very rapid development in the last quarter of a century, largely as affording a pleasant and convenient residential area for the overflow of Liverpool workers. (In the 40 years from 1881 to 1921 the population was more than quadrupled—21,192 to 90,809—the decennial percentage increases being 56, 61, 46 and 15 respectively. And the record of birthplaces in the census returns for 1911 showed that of the total population enumerated in Wallasey only 29.8 per cent. had been born within the borough, 26.7 per cent. having been born in Liverpool or Bootle). But it has also developed an important industrial area on the banks of the Pool, in the form of flour mills and other works, with a growing seaside resort in the district of New Brighton.

The	census	statistics	show.
1116	Census	Statistics	SHOW.

	Males	Females.	Total.
Enumerated night			
population	41,101	49,708	90,809
including Occupied per-			
sons over 12 years	27,427	12,577	40,004
	=66.7%	=25.3%	=44.1%
Working outside bor-			
ough	13,797	3,942	17,739
Workers coming from			
outside	1,929	751	2,680
Net daytime decrease	11,868	3,191	15,059

Wallasey sends outside no less than 44.1 per cent. of the total number of workers enumerated in the borough, a much larger proportion than is the case in the other Merseyside boroughs (Bootle 35.5; Birkenhead 27.1; Liverpool 6.4), showing its residential rather than industrial character. This results in a considerable shrinkage in its daytime population, amounting to 16.6 per cent., inasmuch as there is little compensation for the large exodus of workers to be found in the relatively small number of workers coming in from outside. There is no

very great difference in the percentage of the population over 12 years of age who are returned as "occupied," between Wallasey and the other boroughs; for example, Wallasey 54.9 as compared with Birkenhead 57.9; the different character of the two places is due to the fact that so large a proportion of the workers living in Wallasey find their workplaces outside its area.

The occupations of the working population enumerated in Wallasey is shown in the following summarised analysis:

Males Females

	Males.	remaies.
Public Services and Ad-		
ministration	1,447 or 5.3%	362 or 2.9%
Professional	1,083 ,, 3.9	1,202 ,, 9.6
Commercial	8,649 ,, 31.5	4,274 ,, 34.0
	707 ,, 2.6	4,737 ,, 37.6
Transport and Storage	6,036 ,, 22.0	506 ,, 4.0
Industrial	9,505 ,, 34.7	1,496 ,, 11.9
		W- 971
Takal according to a consequent		a =

Total occupied persons 27,427 12,577

Comparing these statistics with the figures for the other Merseyside boroughs, we note that the percentage of male workers in the Industrial and Transport classes combined is in a marked degree less, viz. 56.7 as compared with percentages ranging from 76.3 to 81.8 in the other three places. The contrast is still greater in the case of females recorded in those groups, viz.: 15.9 as compared with from 27.6 to 39.8. On the other hand the percentage of males and females together engaged in Commercial occupations is approximately twice as great, viz. 32.3 in the case of Wallasey and from 15.3 to 18.1 in the other boroughs. And when we find that the number (12923) of commercial workers enumerated in Wallasey is comparable with the total number (13,875) of Wallasey residents with workplaces in Liverpool, we may reasonably conclude that the large outflowing stream of workers from Wallasey

to Liverpool is mainly composed of men and women employed in the commercial offices and retail shops of that city.

Of the emigrant or *outgoing* workers from Wallasey those going to Liverpool (13,875) and to Birkenhead (1,898) together constitute over 89 per cent. of the total number. Another 350 pass to other places in Cheshire, and 834 to various places in Lancashire (including 286 to Bootle). The total also includes 246 persons with workplaces outside England and Wales; a considerable number of seafaring people being associated with Wallasey. Among the persons enumerated in Wallasey on the night of the census having workplaces elsewhere may have been certain temporary visitors staying in the New Brighton district, but this district does not appear in the list of resorts where such visitors reached as much as 3 per cent. of the normal population according to the Registrar General's estimate.

As regards the *inflow* of workers, the number is small in proportion to those entering the other Merseyside boroughs, 2,680 in all, of which 1,023 came from Birkenhead and 906 from Liverpool, with 143 from the adjacent districts of Wirral.

OTHER TOWNS IN SOUTH-WEST LANCASHIRE AND WEST CHESHIRE.

Having discussed in some detail the movements of workers in the Merseyside boroughs, a brief glance may be given at the facts for the other boroughs in the area under consideration:

	Census Population.	Workers (over 12 years)	Workers sent out	Workers coming in
Southport	 76,621	35,064	6,790	1,883
Wigan	 89,421	42,462	13,316	8,630
St. Helens	 102,640	43,486	6,506	5,088
Widnes	 38,860	16,717	1,405	2,044
Warrington	 76,811	35,596	3,717	5,272
Chester	 40,802	19,089	3,289	4,370

It will be seen that Wigan in a marked degree, and St. Helens to a less extent, send out more workers than they take in exchange, though in both cases they themselves are centres of great industrial activity. The explanation is probably to be found in the fact of the close proximity in each case of colliery districts which draw considerable bodies of men for work in and about the pits. This inference is in accord with the census returns of occupations, which show living in the borough of Wigan 12,624 men engaged in mining and quarrying, equivalent to 42.2 per cent. of the total male workers enumerated; the corresponding figures for St. Helens being 10,594, forming 30.5 per cent. of the occupied male population.

Warrington and Widnes, with the extensive chemical, engineering and other works concentrated in their areas, take in more workers than they send out; the supply coming in the case of Warrington from the adjoining rural districts, while Widnes derives the majority of its incoming workers from Runcorn on the other side of the Mersey.

Southport has a considerable number of residents whose business occupations lie outside in Liverpool, Manchester and other Lancashire towns, and for whose travel backwards and forwards special railway facilities are provided. On the other hand the occupations of the large majority of workers engaged inside the borough—in shops, hotels, lodging houses, and places of amusement, etc., together with a high percentage of indoor domestic servants—are such as to necessitate residence on or near the premises. These facts will go far to explain why the outgoing workers exceed in number the incoming flow in the proportion of nearly four to one. There would also, no doubt, be amongst the persons enumerated in the census of Southport, a certain number of temporary visitors with workplaces elsewhere; the Registrar General estimates that at the date of the census visiting or temporary residents there might amount to slightly over six per cent.

The case of *Chester* is interesting; it is a city of mixed interests—a centre of traffic by canal, road or rail, a military and administrative centre, a shopping and marketing city, with some important industries, and at the same time with certain attractions as a place of residence. It sends out 3,289 workers, of whom 1,104 pass into the neighbouring county of Flint (mainly to the industrial area of Buckley and Hawarden), 266 to Ellesmere Port and 207 to Liverpool. But it brings in a still larger number (4,370), mainly from its adjacent and well populated suburbs, such as Hoole (1,098), the restricted area of the city itself having led in recent years to the increasing development of those districts.

The accompanying diagram shows in the two sections respectively, for various places in the district (I) the percentage of workers who go outside the area in which they reside and (2) the percentage of actual workers in each area who come in from outside.

The figures on which the diagram is based show the large interchanging movement of the working population which takes place between the various districts of this urbanised portion of England. The extent of the interchange is no doubt intensified by the insufficient provision of houses in expanding and developing centres of industry, which has been so marked a feature of our social conditions in recent years; otherwise we could scarcely conceive the continued inconvenience which must attend this ebb and flow of so many daily workers. As striking examples we may instance Bootle, sending out 11,822 and taking in 14,119, a total movement twice a day of 25,941; St. Helens, 6,506 out and 5,088 in, a total movement of 11594; Chester 3,289 out and 4,370 in, a total movement of 7,659; Warrington 3,717 out and 5,272 in, a total movement of 8,989; and Lower Bebington 2,122 out and 5,980 in, a total movement of 8102. The movement is very marked in the colliery districts: the Whiston Rural District area, which

	2 LITHERLAND	77
50	WATERLOO & SEAFORTH	PERCENTAG
44.6	GREAT CROSBY	E
38.2	FORMBY	ГAG
33.5	BOOTLE	111
33	ORMSKIRK	ř <
31.3	WIGAN	OF WORKERS
20-5	PRESCOT	Ω E
19:3	SOUTHPORT	RS
19:3	ST HELENS	
10.4	WARRINGTON	GOING
8.4	WIDNES	Z
6.4	LIVERPOOL	ça
7.6	ELLESMERE PORT	0
17.2	CHESTER	00
27.1	BIRKENHEAD	75
31.7	LOWER BEBINGTON	3
34.9	HOYLAKE & W. KIRBY	0.5
44.2	WALLASEY	

PRESCOT LITHERLAND BOOTLE ORMSKIRK WIGAN LIVERPOOL WARRINGTON WIDNES STHELENS STHELENS SOUTHPORT WALLASEY BIRKENHEAD ELLESMERE PORT			
ORMSKIRK WIGAN LIVERPOOL WARRINGTON WIDNES STHELENS STHELENS SOUTHPORT WALLASEY BIRKENHEAD ELLESMERE PORT		distribute de descripción a la contraction de la	WHISTON R. D.
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SOUTHPORT. NALLASEY BIRKENHEAD ELLESMERE PORT	15.4		LIVERPOOL
SOUTHPORT. NALLASEY BIRKENHEAD ELLESMERE PORT	14:2		WARRINGTON
SOUTHPORT. WALLASEY BIRKENHEAD BLLESMERE PORT			WIDNES
SOUTHPORT. WALLASEY BIRKENHEAD BLLESMERE PORT			ST HELENS
& ELLESMER LORI	6.2		SOUTHPORT
ELLESMER LORI	10.7		WALLASEY BIRKENHEAD
ELLESMER LORI	5.3		BIRKENHEAD
		20.8	EFFERMENTION
CHESTER		2/.5	CHESTER
LOWER BEBINGTON			56.4 LOWER BEBINGTON

includes important coal mines in the neighbourhood of St. Helens and Prescot, draws 3,225 workers from the former and 246 from the latter place, whilst it sends 1,242 and 1,264 persons respectively to the industrial works in those two localities. Wigan again sends out workers to neighbouring urban districts with active collieries: to Abram 1,552, to Ashton 2,906, to Hindley 1,018 and to Ince 3,929, an aggregate total of 9,405, receiving from those same districts in return a total of 3,160.

Lower Bebington is a further striking instance of a large migration of workers. Port Sunlight, in that township, was established in 1888 for the soapworks and associated industries of Messrs. Lever Bros., depending largely for their employees on persons drawn from Birkenhead and other neighbouring centres of population. The building of a large number of workmen's dwellings in the model village attached to the works, and of other houses in the vicinity, raised the population of Lower Bebington from 4,050 in 1,881 to 14,687 in 1,921. But this did not nearly suffice to house the workers required, and so we find from the census returns an importation of 4,123 from Birkenhead, 650 from Liverpool and a considerable number from other areas, which after making allowance for a return exodus from Lower Bebington of 2,122 workers still leaves a net influx of 3,858.

Litherland an urban district on the outskirts of Bootle and Liverpool furnishes a somewhat similar case. With a total enumerated population of 16,384, including 6,608 workers over 12 years of age, no less than 3,694 (or 56 per cent. of the total workers enumerated) go to work outside the area, their places being taken by a large number (2,178) coming in from outside. This daily interchange, to a total of 5,872, is therefore equal to more than one-third of the total enumerated population of all ages.

Hoylake and West Kirby, a purely residential district sending out from its enumerated total population of 17,068

some 2,073 workers to the four Merseyside boroughs, is a notable example of the rapidgrowth of suburban population stimulated by the development of neighbouring industrial and commercial centres. The population increased by no less than 464 per cent. between 1881 and 1921.

CONCLUDING NOTE.

The secular movement of the population of England, by the drift from the rural districts into the towns, which accompanied the progress of the Industrial Revolution in the nineteenth century, acquired a largely increased momentum in the later years of that century and the early years of the following. This centripetal tendency has in those later years led to such a piling up of urban population in certain restricted centres as to bring about a spilling over into the adjacent erstwhile rural areas, thus reversing the direction of the former movement. But this return of population to the country districts is marked not only by a rhythmical tidal backward and forward flow, but also by its carrying along with it a trail of urban associations and ideas, creating entirely new conditions in the midst of rural surroundings which are gradually and greatly changed. These changes, if not wisely guided, may result in destroying all the advantages of the open countryside, without creating anything in the way of well ordered community life and amenities to compensate for such loss. So far the process has been, for the most part, allowed to proceed in a purely haphazard manner, but central and local government authorities have been roused to contemplate the dangers involved, and to take some belated steps to study and deal with the question. Apart from the establishment of true garden cities, or satellite towns, with their self-contained industrial areas. residential districts and agricultural belts, the immediately urgent problems are concerned with this tidal movement of the workers, and with the results, affecting town and country alike, which follow upon the consequent division—and yet at the same time, the linking together—of the interests of homes and workplaces.

